

WHAT IS CLAIMED IS:

1. An information processing apparatus comprising:

5 a) encoding means for error detection or correction encoding information to be distributed in a description format used in a multimedia network,

10 said encoding means error detection or correction encoding at least a portion in a header in the information to be distributed with higher redundancy than an entity in the information to be distributed; and

15 b) transmission means for multiplexing the information to be distributed encoded by said encoding means in a broadcast signal, and transmitting the multiplexed signal.

20 2. An apparatus according to claim 1, wherein the broadcast signal is an FM audio broadcast signal, and said transmission means frequency-multiplexes the information to be distributed in a frequency band different from an FM-modulated audio signal.

25 3. An apparatus according to claim 2, wherein said transmission means multiplexes the information to be distributed as an upper layer in a data format used for multiplexing another information in a description

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format, which is not used in the multimedia network, in an FM audio signal.

4. An apparatus according to claim 3, wherein the  
5 other information includes character information, and the information to be distributed is information in an HTML (HyperText Markup Language) format.

10 5. An apparatus according to claim 3, wherein the data format forms an error correction code, the information to be distributed is transmitted as an entity in the data format, and the header of the information to be distributed forms another error correction code.

15 6. An apparatus according to claim 1, wherein the information to be distributed can contain character information and image information as an entity thereof, and when the entity is the character information, the  
20 information to be distributed has higher redundancy than when the entity is the image information.

25 7. An apparatus according to claim 1, wherein the header of the information to be distributed is transmitted a plurality of number of times while being distributed in the entity.

8. An information processing apparatus comprising:

a) input means for inputting information to be distributed in a description format used in a multimedia network; and

b) transmission means for multiplexing the information to be distributed in a broadcast signal and transmitting the multiplexed signal,

a portion of a header in the information to be distributed being transmitted at least a plurality of number of times while an entity in the information to be distributed is transmitted.

9. An apparatus according to claim 8, wherein said transmission means multiplexes the information to be distributed as an upper layer in a data format used for multiplexing another information in a description format, which is not used in the multimedia network, in an FM audio signal.

10. An apparatus according to claim 9, wherein the other information includes character information, and the information to be distributed is information in an HTML (HyperText Markup Language) format.

11. An apparatus according to claim 10, wherein the data format forms an error correction code, and the

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header of the information to be distributed forms another error correction code.

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12. An information processing apparatus comprising:

a) encoding means for error detection or correction encoding information to be distributed in a description format used in a multimedia network; and

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b) transmission means for multiplexing the information to be distributed encoded by said encoding means in a broadcast signal, and transmitting the multiplexed signal,

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a plurality of kinds of information being able to be transmitted as an entity in the information to be distributed, and said encoding means using different error detection or correction ability in correspondence with the kind of information.

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13. An apparatus according to claim 12, wherein said transmission means multiplexes the information to be distributed as an upper layer in a data format used for multiplexing another information in a description format, which is not used in the multimedia network, in an FM audio signal.

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14. An apparatus according to claim 13, wherein the other information includes character information,

and the information to be distributed is information in an HTML (HyperText Markup Language) format.

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15. An information processing apparatus comprising:

a) input means for inputting information to be distributed in a description format used in a multimedia network; and

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b) transmission means for multiplexing the information to be distributed in a broadcast signal and transmitting the multiplexed signal,

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the information to be distributed being transmitted as an entity in a data format used for multiplexing another information in a description format, which is not used in the multimedia network, in an FM audio signal, the data format forming an error correction code, and a header of the information to be distributed forming an error correction code different from the error correction code.

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16. An apparatus according to claim 15, wherein the broadcast signal is an FM audio broadcast signal, and said transmission means frequency-multiplexes the information to be distributed in a frequency band different from an FM-modulated audio signal.

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17. An apparatus according to claim 16, wherein the other information includes character information, and the information to be distributed is information in an HTML (HyperText Markup Language) format.

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18. An information processing method comprising the steps of:

error detection or correction encoding information to be distributed in a description format used in a multimedia network, at least a portion in a header in the information to be distributed being error detection or correction encoded with higher redundancy than an entity in the information to be distributed; and

multiplexing the encoded information to be distributed in a broadcast signal, and transmitting the multiplexed signal.

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19. An information processing method comprising the steps of:

inputting information to be distributed in a description format used in a multimedia network; and

multiplexing the information to be distributed in a broadcast signal and transmitting the multiplexed signal, a portion of a header in the information to be distributed being transmitted at least a plurality of number of times while an entity in the information to be distributed is transmitted.

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error detection or correction encoding information to be distributed in a description format used in a multimedia network; and

21. An information processing method comprising  
the steps of:

inputting information to be distributed in a  
description format used in a multimedia network; and  
multiplexing the information to be distributed in  
a broadcast signal and transmitting the multiplexed  
signal,

the information to be distributed being transmitted as an entity in a data format used for multiplexing another information in a description format, which is not used in the multimedia network, in an FM audio signal, the data format forming an error correction code, and a header of the information to be

distributed forming an error correction code different from the error correction code.

5 22. An information processing apparatus comprising:

10 a) reception means for receiving a broadcast signal obtained by multiplexing information to be distributed in a description format used in a multimedia network and an error correction or detection check code added for at least partial information of the information to be distributed, as an entity of a data format which is used for multiplexing predetermined information in an FM audio signal and includes an error correction check code; and

15 b) processing means for performing error correction or detection processing of the information to be distributed using the error correction check code and the error correction or detection check code,

20 said processing means executing processing based on the error correction check code and processing based on the error correction or detection check code at different timings.

25 23. An apparatus according to claim 22, wherein the processing based on the error correction check code is executed upon reception of the broadcast signal, and the processing based on the error correction or

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detection check code is executed upon displaying or outputting the information to be distributed.

24. An apparatus according to claim 23, wherein  
5 the information to be distributed includes header information, and the at least partial information of the information to be distributed is the header information.

10 25. An apparatus according to claim 23, wherein the information to be distributed includes character information, and the at least partial information of the information to be distributed is the character information.

15 26. An apparatus according to claim 25, wherein the predetermined information is character information in a description format which is not used in the multimedia network, and the character information and  
20 character information in the information to be distributed can be displayed using common display means.

25 27. An apparatus according to claim 26, wherein the information to be distributed includes image information, and the display means displays a message

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indicating reception of the image information when the image information is received.

5 28. An apparatus according to claim 26, further comprising:

storage means for storing the information to be distributed; and

10 informing means for informing that the received information to be distributed is stored in said storage means and has not been output to an external device.

15 29. An apparatus according to claim 26, wherein the predetermined information includes character information, and the information to be distributed is information in an HTML (HyperText Markup Language) format.

30. An information processing apparatus comprising:

20 a) reception means for receiving a broadcast signal obtained by multiplexing information to be distributed in a description format, used in a multimedia network, as an entity of a data format used for multiplexing predetermined information in an FM audio signal;

25 b) storage means for storing the information to be distributed; and

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c) informing means for informing that the received information to be distributed is stored in said storage means and has not been output to an external device.

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31. An apparatus according to claim 30, wherein the predetermined information includes character information, and the information to be distributed is information in an HTML (HyperText Markup Language) format.

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32. An information processing apparatus comprising:

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a) reception means for receiving a broadcast signal obtained by multiplexing information to be distributed in a description format, used in a multimedia network, as an entity of a data format used for multiplexing first character information in an FM audio signal; and

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b) display means for displaying the first character information,

said display means displaying second character information when the information to be distributed has the second character information.

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33. An apparatus according to claim 32, wherein when the information to be distributed has image

information, said display means displays a message indicating reception of the image information.

5 34. An apparatus according to claim 32, wherein the information to be distributed is information in an HTML (HyperText Markup Language) format.

35. An information processing apparatus comprising:

10 a) reception means for receiving a broadcast signal obtained by multiplexing information to be distributed in a description format, used in a multimedia network, as an entity of a data format used for multiplexing character information in an FM audio signal;

15 b) storage means for storing the information to be distributed; and

20 c) operation means capable of executing a command for displaying information stored in said storage means, and a command for outputting the stored information to an external device, at different timings.

25 36. An apparatus according to claim 35, wherein after the information to be distributed is stored in said storage means, processing of the entity is started in response to the display command.

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39. An information processing method comprising the steps of:

receiving a broadcast signal obtained by  
multiplexing information to be distributed in a  
description format, used in a multimedia network, as an  
entity of a data format used for multiplexing  
5 predetermined information in an FM audio signal;

storing the information to be distributed in  
storage means; and

informing that the received information to be  
distributed is stored in the storage means and has not  
10 been output to an external device.

40. An information processing method comprising  
the steps of:

receiving a broadcast signal obtained by  
15 multiplexing information to be distributed in a  
description format, used in a multimedia network, as an  
entity of a data format used for multiplexing first  
character information in an FM audio signal; and

displaying second character information using  
20 display means for displaying the first character  
information when the information to be distributed has  
the second character information.

41. An information processing method comprising  
25 the steps of:

receiving a broadcast signal obtained by  
multiplexing information to be distributed in a

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description format, used in a multimedia network, as an entity of a data format used for multiplexing character information in an FM audio signal;

5 storing the information to be distributed in storage means; and

executing a command for displaying information stored in the storage means, and a command for outputting the stored information to an external device, at different timings.

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42. An information processing apparatus comprising:

15 a) input means for inputting information data, and a check code for correcting an error of the information data;

b) detection means for detecting an error state of the information data;

c) setting means for setting an allowable error state of the information data; and

20 d) control means for controlling processing for the information data input by said input means in accordance with outputs from said setting means and said detection means.

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43. An apparatus according to claim 42, wherein the information data is multiplexed in a broadcast signal.

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5 44. An apparatus according to claim 43, wherein the broadcast signal is an FM audio broadcast signal, and the information data is frequency-multiplexed in a frequency band different from an FM-modulated audio signal.

10 45. An apparatus according to claim 44, wherein the information data is character information of an FM multiplexed broadcast.

46. An apparatus according to claim 42, wherein the information data is information in an HTML (HyperText Markup Language) format.

15 47. An apparatus according to claim 42, wherein said control means controls display processing of the information data.

20 48. An information processing method comprising the steps of:  
inputting information data, and a check code for correcting an error of the information data;  
detecting an error state of the information data;  
25 setting an allowable error state of the information data; and

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controlling processing for the input information  
data in accordance with results in the setting step and  
the detection step.

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